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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

IN RE: ABDEL-MONEM, et al.)	
)	APPEAL NO. _____
SERIAL NO: 10/706,900)	
)	
FOR: METAL COMPLEXES OF ALPHA)	
AMINO DICARBOXYLIC ACIDS)	
)	BRIEF ON APPEAL
)	
)	
FILED: November 13, 2003)	
)	
GROUP ART UNIT: 1625)	

To the Commissioner of Patents and Trademarks
Mail Stop PATENT APPEAL,
P. O. Box 1450,
Alexandria, VA 22313-1450

Dear Sirs:

Please enter the following Brief on Appeal into the record.


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I. INTRODUCTION

This is an appeal of the Final Rejection dated December 28, 2005, finally rejecting claim 1. The appealed claim 1 in its appealed form is set forth in an attached Appendix.

II. REAL PARTY OF INTEREST

The real party of interest in the present appeal is Zinpro Corporation, a Minnesota corporation of Eden Prairie, Minnesota, assignee by assignment from the co-inventors recorded in the parent application of which this is a divisional, U. S. Patent Application Serial No. 10/272,382 recorded on February 24, 2003 at Reel/Frame 013778/0042.

III. RELATED APPEALS AND INTERFERENCES

There is a related appeal at the time of this filing of case U. S. Serial No. 10/712,422. The parent case relating to the compounds and compositions, as opposed to this method of making case, (parent case Serial No. 10/272,382 filed 10/16/2002) is also pending on appeal.

IV. STATUS OF CLAIMS

Claim 1 was originally submitted as claim 14 in the parent application, U. S. Serial No. 10/272,382, but was divided out in a response to a restriction requirement in the parent application. This Divisional of U. S. Serial No. 10/272,382 was filed November 13, 2003 in response to a three way restriction requirement, and was assigned Serial No. 10/706,900. Claim 1 was amended October 21, 2004 in response to an August 6, 2004 Office Action. Final rejection of amended claim 1 was issued January 12, 2005. An Amendment After Final Rejection then followed by a Supplemental Amendment After Final Rejection was filed March 1, 2005. It was entered with an Advisory Action of March 23, 2005.

Following the Final Rejection of January 12, 2005 and the Advisory Action of March 23, 2005, Appellant filed a Notice of Appeal dated March 31, 2005. An appeal brief was filed on or about April 18, 2005. After conference the Examiner withdrew the previous final rejection of claim 1 and entered a new rejection dated August 9, 2005. Applicant amended claim 1 in response on October 7, 2005. Amended claim 1 was again finally rejected on December 28, 2005 over new art. The claim appealed is claim 1 attached in an Appendix.

V. STATUS OF AMENDMENTS

There has been no Amendment after the latest Final Rejection. A timely Notice of Appeal was filed on February 16, 2006.

VI. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 sets forth a method making neutral complexes of an essential trace element and a dicarboxylic alpha amino acid, with one trace moiety for each amino acid moiety. The process assures high yield, little or no hydroxide precipitation, and highly processable small crystals of pure product.

VII. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. Claim 1 stands rejected as obvious over Moore, U. S. Patent No. 6,323,354 and independently rejected as obvious over ICN Catalogue. All other previously urged grounds of formal objection have been withdrawn in the Final Office Action of December 28, 2005.

VIII. ARGUMENT

A. **Process Claim 1 is Not Obvious Under 35 U.S.C. § 103(a) over Moore, U. S. Patent No. 6,323,354 Which Fails to Make a *prima facie* Case**

1. **The Claimed Process and Its Advantage**

It is important to remember that claim 1 indicates directly in its language (see Appendix I) that it is preparing precise compounds, i.e., complexes of an essential trace element and a dicarboxylic alpha amino acid having a net zero charge. One such example would be for zinc, and a dicarboxylic α -amino acids, such as for example glutamic acid. There is a chelate formed between the zinc and the α amino moiety. This process is accomplished by mixing a water soluble monobasic and amino dicarboxylic acid with a water soluble metal salt of the trace element in salt form and adjusting the pH to neutral, in a manner that avoids formation of insoluble metal hydroxides. This involves pH adjustment, preferably with slow addition and stirring to avoid high pH spikes (see Specification, p. 9, lines 3-30 and p. 10, lines 1-25), followed by a quick cool.

Claim 1 as present in this Appeal and as set forth in the Appendix has six essential requirements, and those are:

- (1) using a water soluble monobasic and α amino acid dicarboxylic acid;
- (2) mixing it with:
- (3) a water soluble metal salt of a trace element in salt form;
- (4) adjusting the pH to neutral;
- (5) in a manner to avoid formation of insoluble metal hydroxides; and

(6) quick cooling to form small crystals of the neutral complex.

The small crystals of the neutral complex can then be recovered and used for the feed supplement compositions of the present invention. The resulting process is efficient, quick and operates at high yield.

The process as claimed is generally described in the Specification beginning at page 8, line 29 through page 10. Page 9 explains some of the difficulties in arriving at the original process and represents failures of what might be expected of more efficient processes. There described are two different approaches that were initially tried and failed. The first involved use of metal oxides rather than salts and this resulted in contaminating of the product (page 9, line 7). The second failed attempt involved amino acid which was dissolved in a sodium hydroxide and potassium hydroxide base which was treated with either the metal oxide or a solution of the metal salt to give the complex. This approach resulted in inconsistent quality (page 9, line 11). It also gave yearly premature precipitation of metal hydroxides thus contaminating and decreasing yield (page 9, line 15). The process of this invention includes many advantages outlined at page 10, lines 1-23.

2. Moore Fails to Suggest the Six Process Limits

Moore fails completely, even remotely, to suggest the six limits as defined in this process claim. Rather Moore prepares different compounds not from monobasic α amino dicarboxylic acids, but rather from use of hydrolyzed aqueous lipoproteins. The Examiner acknowledges in his final rejection the instant invention "differs from the prior art" but even so "the reference does offer guidance" (Final Rejection of 12/28/2005 at pp. 4-5). But the

guidance offered by the reference is simply wrong for the process of claim 1! It prepares different compounds (see reference Moore citation at col. 2, ll. 29-53 and col. 4, ll. 55-58). It uses the wrong pH. See final rejection, page 5 where the Examiner talks about pH's of between 3 and 7 (acid to neutral is the range), whereas the pH of the present chemical process is neutral only. Therefore it prepares its composition of different compounds at different pH's, and it fails to teach anything at all about avoiding formation of insoluble metal hydroxides (step 5) by quick cooling to form small crystals in the neutral complex (step 7). Therefore it cannot be seen how this invention could be deemed *prima facie* obvious by Moore U.S. Patent No. 6,323,354. The Examiner's arguments about "useful guidelines" are nothing more than conjecture. And conjecture alone of "guidance" cannot support an assertion of obviousness (cf. W.L. Gore & Assoc. v. Garlock, 721 F.2d 1540 at 1554 (mere conjecture respecting characteristics won't support anticipation) and Ex parte Humphery's 24 U.S.P.Q.2d 1255 at 1262 (specific reasons must support a § 103 rejection). It cannot be "guidance" to the invention by teaching a process which is different, using different parameters, to make different compounds.

3. Claim 1 Was Additionally Rejected as Being Obvious Over ICN (A World of Biomedical Products Catalog), 1995, p. 1194)

ICN teaches a synthetic amino diet mixture for an animal comprising: L-aspartic acid (0.34%), L-glutamic acid (3.41%), and a salt mixture containing magnesium salt (9.98%), copper salt (0.15%), zinc salt (0.02%), iron salt (0.62%), and etc. (see page 1194, right column). The Examiner asserts that the prior art again offers "guidance" such that the

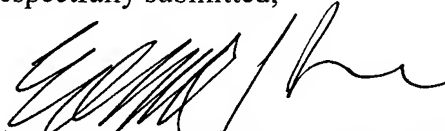
composition can be adjusted to pellet by adding dextrin and sucrose ingredients (Final rejection of 12/28/2005, page 6). Here again the Examiner acknowledges that ICN relates to different compounds, but according to the Examiner "even so the reference does offer guidance that the synthetic amino diet composition can be adjusted depending on use". It is not seen how this statement at all supports the obviousness rejection of process claim 1. It is a non sequitor. So what? The reference fails to disclose any of the six limitations enumerated above and fails to disclose any kind of a similar process. The Examiner cites the Becker and Russel cases. But *In re Becker*, 33 USPQ 33 (C.C.P.A. 1937) and *In re Russell*, 439 F.2d 1228, 169 USPQ 426 (C.C.P.A.) are inapposite. The Examiner cites those cases for the proposition that merely selecting proportions and ranges is not patentable absent a showing of criticality. It may stand for that principle, but one must at least have a reference which describes the steps of the process applied to the same materials. Then, and only then, perhaps merely selecting proportions and ranges might not be patentable. Here the Examiner fails to have any reference that shows the series steps of the process, let alone application to the same material. ICN Cagalogue shows absolutely nothing relevant to patentability of this process.

IX CONCLUSION

Claim 1 is non-obvious over either reference and the Examiner should be reversed and the case allowed. This case already endured the expense of one appeal which was in effect reversed before it ever got to the Board. Then followed another prosecution over different references with yet another theory. It fairs no better.

Enclosed herein please find the Appeal Brief and the required fee of \$250 for a small entity. If this amount is not correct, please consider this a request to debit Deposit Account No. 26-0084 accordingly.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edmund J. Sease', with a stylized flourish at the end.

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X. CLAIMS APPENDIX

The Appendix attached contains a single claim which forms the claim of this Appeal.

Claim 1. A method of preparing a complex of an essential trace element and a dicarboxylic alpha amino acid, containing one ion of the trace element for each molecule of the dicarboxylic amino acid, with the molecule of the complex having a net zero charge, comprising:

mixing a water soluble monobasic and amino dicarboxylic acid with a water soluble metal salt of the trace element in salt form;
adjusting the pH to neutral in a manner to avoid formation of insoluble metal hydroxides;
and, quickly cooling the reactants to form small crystals of the neutral complexes.

XI. EVIDENCE APPENDIX

None

XII. RELATED PROCEEDINGS APPENDIX

None.